# Ambient-Major Ions of New Jersey, Series DGS05-2, Edition 20140114

Metadata also available as

# Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

# Identification Information:

Citation:

Citation Information:

Originator:

New Jersey Department of Environmental Protection (NJDEP), NJ Geological

and Water Survey (NJGWS) *Publication Date:* 20040315

*Title:* 

Ambient-Major Ions of New Jersey, Series DGS05-2, Edition 20140114

Edition: 20140114

Geospatial\_Data\_Presentation\_Form: vector digital data

Series\_Information:

Series\_Name: Digital Geodata Series

*Issue\_Identification:* DGS05-2

Publication\_Information:

Publication\_Place: Trenton, NJ

Publisher: New Jersey Department of Environmental Protection (NJDEP)
Online Linkage: <a href="mailto:shttp://www.state.nj.us/dep/njgs/geodata/index.htm">http://www.state.nj.us/dep/njgs/geodata/index.htm</a>

Online\_Linkage: <a href="mailto:stall.html"><a href="mailto:stall.html">http://www.nj.gov/dep/gis/listall.html</a>>

Description:

Abstract:

Major ions are defined here as chemical constituents that generally occur at concentrations greater than 1 mg/L in water. The major constituents tested for

in the Ambient Ground Water Quality Monitoring Network include: Calcium Dissolved as Ca, Magnesium Dissolved as Mg, Sodium Dissolved as Na, Potassium Dissolved as K, Chloride Dissolved as Cl, Sulfate Dissolved as SO4, Fluoride Dissolved as F, Silica Dissolved as SiO2 and Bicarbonate as HCO3, Carbon Organic Dissolved as C. Concentrations are reported in milligrams per liter (mg/L). The Field Parameters are also listed under this heading. The parameters are as follows: Water Temperature (°C), Air Pressure (mm of Hg), Specific Conductance @ 25 °C (us/cm), Dissolved oxygen (mg/L), pH Water Whole Field (Standard Units), and pH Water Whole Laboratory (Standard Units). This update (2013) includes the data from the complete second sampling cycle of all 150 wells which comprise the redesigned NJAGWQMN. *Purpose*:

Ground-water quality data from the Ambient Ground Water Quality Monitoring Network was and is being collected to increase our understanding of water quality as it relates to the geologic character of various aquifers and non-point source impacts from land use. This data set was established to allow all interested parties easy access to the network data in a visual format. *Supplemental Information:* 

New Jersey's Ambient Ground-Water Quality Network (AGWQN) is a cooperative program between the New Jersey Department of Environmental Protection (NJDEP) and United States Geological Survey (USGS) that started in 1983 when it was discovered that the ambient ground-water quality data was needed, yet lacking, in New Jersey. Since it's inception, over 500 existing and installed wells have been sampled. Historically, chemical and physical parameters analyzed included: 1) Field parameters such as pH and specific conductance, 2) Major ions, 3) Metals, 4) Nutrients, 5) Radioactivity, and 6) Volatile organic compounds. In the redesigned shallow-well network described below pesticides have also been added. During the first few years an intensive ground-water survey was conducted in a northern valley-fill aquifer system (> 50 wells, data not in this dataset) and some regional sampling was conducted in the coastal plain of southern New Jersey. In 1986 a lack of data in the northern bedrock portion of the state was recognized and finalized goals for the network were established. Those goals were: 1) Determine chemical ranges of groundwater constituents within and between rock types, 2) Determine geochemical reasons for the differences observed, and 3) Determine long term trends in ambient water quality by resampling using an 8 to 20 year cycle. -99999 implies the constituent was detected but the concentration could not be quantified or was estimated below the reporting limit and the confidence in the concentration determination is not acceptable for standard reporting. Note: an estimated value can also be designated for other reasons. See the annual USGS

Water-Data Reports NJ-(year of interest) for the estimated values and an

explanation. The actual estimated value is not shown in this database. A zero (0) implies no sampling was performed for that parameter.

Time\_Period\_of\_Content: Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 1987 Ending Date: 2013

Currentness Reference: ground condition

Status:

Progress: Complete

Maintenance and Update Frequency: As needed

*Spatial\_Domain:* 

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -75.593271 East\_Bounding\_Coordinate: -73.890308 North\_Bounding\_Coordinate: 41.357794 South Bounding Coordinate: 38.849424

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: ISO 19115 Topic Category

Theme Keyword: environment

Theme:

Theme Keyword Thesaurus: EPA GIS Keyword Thesaurus

Theme\_Keyword: Ambient Theme Keyword: Ground Water

Theme Keyword: Ions

Theme\_Keyword: Land Use

Theme\_Keyword: Major

Theme\_Keyword: NJDEP

Theme\_Keyword: NJGS

Theme\_Keyword: Water

Theme\_Keyword: Well

Theme:

*Theme\_Keyword\_Thesaurus:* User

*Theme\_Keyword:* NJDEP

Theme\_Keyword: Water Quality Monitoring Locations

Place:

Place\_Keyword\_Thesaurus: None Place Keyword: State of New Jersey

Access\_Constraints: None

 $Use\_Constraints:$ 

New Jersey Department of Environmental Protection (NJDEP) Data Use and Distribution Agreement

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Point\_of\_Contact:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Bousenberry, Raymond Contact\_Organization: NJDEP, NJGWS Contact\_Position: Research Scientist 2

Contact Address:

Address\_Type: mailing and physical address

Address: 29 Arctic Pkwy, Box 420, Mail Code 29-01

City: Trenton

State\_or\_Province: NJ Postal Code: 08625-0420

Contact Voice Telephone: 609-984-6587

Contact\_Electronic\_Mail\_Address: Raymond.Bousenberry@dep.nj.gov

Contact Instructions: via email

Security\_Information:

Security\_Classification\_System: FIPS Pub 199 Security Classification: No Confidentiality

Security Handling Description: Standard Technical Controls

# Data Quality Information:

Logical\_Consistency\_Report: Tests for integrity have not been performed Completeness\_Report:

No information on the features represented regarding omissions, selection criteria, generalization, definitions used, and other rules used to derive the data set

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report: None

Lineage:

Process\_Step:

Process\_Description:

This update (2014) includes the data from the completed second sampling cycle of all 150 wells which comprise the redesdigned NJAGWQMN

Process\_Date: 2013
Process\_Contact:
Contact Information:

Contact\_Person\_Primary:

Contact\_Person: Bousenberry, Raymond Contact\_Organization: NJDEP, NJGWS

Contact\_Position: Environmental Specialist 3

Contact\_Address:

Address\_Type: mailing address

Address: 29 Arctic Pkwy, PO Box 420, Mail Code 29-01

City: Trenton

State\_or\_Province: NJ Postal Code: 08625-0420

Contact Voice Telephone: 609-984-6587

Contact Electronic Mail Address: Raymond.Bousenberry@dep.nj.gov

Contact Instructions: via email

Process Step:

*Process\_Description:* 

This update (2007) includes the data from the remaining 57 wells (sampled in 2003 and 2004) out of the 150 wells which comprise the redesigned

NJAGWQMN. This data completes one full sampling cycle of the network.

Process\_Date: 2007
Process\_Contact:
Contact\_Information:
Contact\_Person\_Primary:

Contact\_Person: Bousenberry, Raymond Contact\_Organization: NJDEP, NJGWS Contact Position: Environmental Specialist 3

Contact Address:

Address\_Type: mailing address

Address: 29 Arctic Pkwy, Box 420, Mail Code 29-01

City: Trenton

State\_or\_Province: NJ Postal\_Code: 08625-420

Contact\_Voice\_Telephone: 609-984-6587

Contact\_Electronic\_Mail\_Address: Raymond.Bousenberry@dep.nj.gov

Contact\_Instructions: via email

Spatial\_Data\_Organization\_Information:

Direct\_Spatial\_Reference\_Method: Vector

Point\_and\_Vector\_Object\_Information:

SDTS\_Terms\_Description:

SDTS\_Point\_and\_Vector\_Object\_Type: Entity point

Point\_and\_Vector\_Object\_Count: 150

Spatial\_Reference\_Information:

Horizontal Coordinate System Definition:

Planar:

*Grid\_Coordinate\_System:* 

Grid Coordinate System Name: State Plane Coordinate System

State Plane Coordinate System:

SPCS Zone Identifier: 2900

Planar Coordinate Information:

Planar Coordinate Encoding Method: coordinate pair

Coordinate\_Representation: Abscissa\_Resolution: 0.000100 Ordinate Resolution: 0.000100

Planar Distance Units: survey feet

Geodetic Model:

Horizontal Datum Name: North American Datum of 1983

Ellipsoid Name: Geodetic Reference System 1980

Semi-major Axis: 6378137.000000

Denominator of Flattening Ratio: 298.257222

*Vertical\_Coordinate\_System\_Definition:* 

Altitude System Definition:

Altitude Datum Name: North American Vertical Datum of 1988

Altitude\_Resolution: 0.000100 Altitude\_Distance\_Units: feet Altitude Encoding Method:

Explicit elevation coordinate included with horizontal coordinates

# *Entity\_and\_Attribute\_Information:*

 $Detailed\_Description:$ 

Entity\_Type:

Entity\_Type\_Label: Major\_Ions

Entity\_Type\_Definition: Ambient-Major Ions
Entity Type Definition Source: NJDEP/NJGWS

Attribute:

Attribute\_Label: OBJECTID

Attribute\_Definition: Internal feature number.

Attribute\_Definition\_Source: ESRI

Attribute\_Domain\_Values: Unrepresentable Domain:

Sequential unique whole numbers that are automatically generated.

Attribute:

Attribute\_Label: Shape

Attribute\_Definition: Feature Geometry Attribute Definition Source: ESRI

Attribute\_Domain\_Values:

Unrepresentable Domain: Coordinates defining the features

Attribute:

Attribute\_Label: GWSI\_Numbe

Attribute Definition: Groundwater Site Inventory Number

Attribute\_Definition\_Source: USGS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: MW

Attribute\_Definition: Monitoring Well Number Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: Hydroname

Attribute\_Definition: Name of Aquifer

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

*Unrepresentable\_Domain:* Unique

Attribute:

Attribute Label: Land Use

Attribute\_Definition: Land Use Designation Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: Geoname

Attribute\_Definition: Name of stratigraphic unit Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: GeoAbb

Attribute\_Definition: Abbreviation for stratigraphic unit

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

*Attribute\_Label:* County

Attribute\_Definition: County Name

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: Municipali

Attribute\_Definition: Municipality Name

Attribute Definition Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: Latitude

Attribute Definition: (DDMMSS)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: Longitude

Attribute Definition: (DDMMSS)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute\_Label: Easting

Attribute\_Definition: State Plane Feet

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: Northing

Attribute\_Definition: State Plane Feet

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute\_Label: STAID

Attribute\_Definition: Station ID Number

Attribute\_Definition\_Source: USGS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: Dates

Attribute\_Definition: Date Sampled

Attribute\_Definition\_Source: NJDEP/NJGWS

 $Attribute\_Domain\_Values:$ 

Unrepresentable\_Domain: Unique

Attribute:

Attribute\_Label: P00010

Attribute\_Definition: Water Temperature (°C) Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00025

Attribute\_Definition: Air Pressure (mm of Hg) Attribute Definition Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00095

Attribute Definition: Specific Conductance @25 °C (µS/cm)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00300

Attribute\_Definition: Dissolved Oxygen (mg/L)
Attribute Definition Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00400

Attribute\_Definition: pH Water, Whole Field (Standard Units)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: P00403

Attribute\_Definition: pH Water, Whole Laboratory (Standard Units)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute\_Label: P00453

Attribute\_Definition: Bicarbonate as HCO3 (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00681

Attribute\_Definition: Carbon, Organic, Dissolved as C (mg/L)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00915

Attribute Definition: Calcium Dissolved as Ca (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00925

Attribute\_Definition: Magnesium Dissolved as Mg (mg/L)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00930

Attribute Definition: Sodium Dissolved as Na (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00935

Attribute\_Definition: Potassium Dissolved as K (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: P00940

Attribute\_Definition: Chloride Dissolved as Cl (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: P00945

Attribute\_Definition: Sulfate Dissolved as SO4 (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute Label: P00950

Attribute\_Definition: Fluoride Dissolved as F (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P00955

Attribute\_Definition: Silica Dissolved as SiO2 (mg/L)

Attribute Definition Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P39086

Attribute Definition: Alkalinity Dissolved Incremental Titration as CaCO3

(mg/L)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P61028

Attribute Definition: Turbidity Field Water Unfiltered (NTU)

Attribute Definition Source: NJDEP/NJGWS

Attribute Domain Values:

Unrepresentable Domain: Unique

Attribute:

Attribute Label: P70300

Attribute Definition: Residue on Evaporation at 180 °C Dissolved (mg/L)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Attribute:

Attribute\_Label: P90095

Attribute\_Definition: Specific Conductance (µS/cm)

Attribute\_Definition\_Source: NJDEP/NJGWS

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Unique

Overview\_Description:

Entity\_and\_Attribute\_Overview:

-99999 implies the constituent was detected but the concentration could not be quantified or was estimated below the reporting limit and the confidence in the concentration determination is not acceptable for standard reporting. Note: an estimated value can also be designated for other reasons. See the annual USGS Water-Data Reports NJ-(year of interest) for the estimated values and an explanation. The actual estimated value is not shown in this database. A zero (0) implies no sampling was performed for that parameter.

Note: Attribute headings may be truncated in Shapefile format. Additionally, the attribute OBJECTID is changed to FID in the Shapefile format.

Entity and Attribute Detail Citation:

For detection limits, analytical methods, etc., reference USGS annual reports "Water Resources Data - New Jersey" for the year of interest.

## Distribution Information:

Distributor:

Contact Information:

Contact\_Person\_Primary:

Contact\_Person: Bousenberry, Raymond Contact Position: Environmental Specialist 3

Contact Address:

*Address\_Type:* mailing address

Address: 25-35 Arctic Pkwy Eshap/Land Use

City: Ewing Twp State\_or\_Province: NJ Postal Code: 08638

Contact\_Voice\_Telephone: 609-984-6587

Contact\_Electronic\_Mail\_Address: Raymond.Bousenberry@dep.nj.gov

Contact\_Instructions: via email

Resource\_Description: Downloadable Data

Distribution\_Liability:

Although these data have been processed successfully on a computer system at NJDEP, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data to evaluate data set limitations, restrictions or intended use. The U.S. Environmental Protection Agency shall not be held liable for improper or incorrect use of the data described and/or contained herein.

Standard\_Order\_Process:

Digital\_Form:

Digital\_Transfer\_Information:

Format\_Name: AVSHP

Format\_Version\_Number: 10.x

Transfer\_Size: 0.004
Digital Transfer Option:

Online Option:

Computer Contact Information:

Network Address:

Network Resource Name: <a href="http://www.state.nj.us/dep/njgs/geodata/dgs05-">http://www.state.nj.us/dep/njgs/geodata/dgs05-</a>

2.htm> Fees: None

# *Metadata\_Reference\_Information:*

Metadata Date: 20140327

Metadata Future Review Date: 20180114

Metadata\_Contact:
Contact\_Information:
Contact\_Person\_Primary:

Contact\_Person: Bousenberry, Raymond Contact\_Organization: NJDEP, NJGWS Contact Position: Environmental Specialist 3

Contact Address:

Address\_Type: mailing and physical address

Address: 29 Arctic Pkwy, PO Box 420, Mail Code:29-01

City: Trenton

State\_or\_Province: NJ Postal Code: 08625

Contact\_Voice\_Telephone: 609-984-6587

Contact\_Electronic\_Mail\_Address: Raymond.Bousenberry@dep.nj.gov

Contact\_Instructions: via email

Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial

Metadata

Metadata\_Standard\_Version: FGDC-STD-001-1998

Metadata\_Time\_Convention: local time

Metadata\_Extensions:

Online\_Linkage: <a href="http://www.esri.com/metadata/esriprof80.html">http://www.esri.com/metadata/esriprof80.html</a>

Profile Name: ESRI Metadata Profile